

part 4, the fibers of the fiber bundles 3 are in a condition in which they are completely unjoined with the base sheet 2, since no spot-form joining parts 7 are present from the central joining part 4 up to the end 31a in the direction of flow of the fibers. Also, the fiber bundles 3 between the other end edge 2b of the base sheet 2 and the central joining part 4 of the fiber bundles 3 are joined by the spot-form joining parts 7. The ends 31a, 31b in the direction of flow of the fibers of the fiber bundles 3 are liberated without being joined with the base sheet 2. The fibers of the fiber bundles 3 are constituted so as to be able to move freely in a length from the central joining part 4 or spot-form joining part 7 up to the tips 31a, 31b.

In this way, in the sheet 1 for a cleaning tool, between the central joining part 4 and the ends 2a, 2b, the fiber bundles 3 are joined by means of the spot-form joining parts 7 constituting intermittent joining parts, so, when seen from the direction of flow of the central joining part 4, the length of free movement of the fibers from the end of the fiber bundle 3 up to the joining part is different in the portions where a joining part with the spot-form joining part 7 is provided and in the portions where such a joining part is absent; in this way, entanglement of the fibers of the fiber bundles 3 can be prevented.

As shown in Figure 2, the spot-form joining parts 7 are provided directly above lines (parallel lines) 5a, 5b, 6a,

restriction if nonwoven fabric sheet is employed, preferably the short fibers (fiber bodies) constituting the sheet are short fibers having thermal fusibility with the fiber bundles 3. Examples that may be given of such short fibers having thermal fusibility include fibers such as polypropylene, polyethylene or polyethylene terephthalate and composite fibers of these of the sheath/core type or side-by-side type.

Examples that may be given of the nonwoven fabric sheet employed as the base sheet 2 include spun lace nonwoven fabric, spun-bonded nonwoven fabric, thermally bonded nonwoven fabric, air-through bonded nonwoven fabrics, or point-bonded nonwoven fabrics and the like. Spun-lace nonwoven fabrics, thermally bonded nonwoven fabrics and the like are especially desirable in this case. The nonwoven fabric sheet that is used may be constructed from a single sheet, or may be constructed by laminating a plurality of sheets of the same or different types.

The fiber bundles 3 that are used in the sheet 1 for a cleaning tool are aggregates of fibers that are overlapped side by side so that numerous fibers are oriented in the same direction, with the respective fibers being wrapped to an extent that prevents the fibers from coming undone. The fiber bundles 3 are formed into sheets and are handled as sheet-form fiber bundles. Also, the fiber bundles 3 may be partially mutually coupled by thermal fusion or the like.

The fiber bundles 3 may be constituted of fibers of the same type or may be constituted of fibers of a plurality of different types.

The fiber bundles 3 may be constituted solely of fibers of the same thickness or may be constituted of fibers of a plurality of thicknesses. Irrespective of whether the fiber bundles 3 are the same or different in respect of the types of constituent fibers and their thickness, they may be constituted of fibers of different colors.

For example, natural fibers such as cotton, wool or the like, synthetic fibers such as polyethylene, polypropylene, polyethylene terephthalate, nylon, polyacrylics or the like, composite fibers such as core-sheath type fibers, ocean-island type fibers, i.e. islands-in-the-sea type fibers, side-by-side type fibers or the like are used as the fiber bundles 3. Thermally fusible synthetic fibers or composite fibers are preferable, in particular core-sheath type composite fibers whose core is made of polypropylene and whose sheath is made of polyethylene are desirable since they combine the excellent thermal fusibility of the polyethylene constituting the sheath with the "body" of the polypropylene constituting the core.

Also, the fibers that are employed for the fiber bundles 3 may be crimped, being for example mechanically crimped or thermally crimped.

Furthermore, the fiber bundles 3 may also be long fiber bundles generally called "tow" that are manufactured from

and/or back surface of the base sheet 2, the outer surface of this tacky adhesive layer being covered with a peel-off sheet. If a sheet 1 for a cleaning tool is formed in this way, when attaching to the cleaning tool 10 for floor wiping, the tacky adhesive layer can be joined at the position of a stop 13 on the upper surface of the pedestal 12 after removing the peel-off sheet. It should be noted that, if a tacky adhesive layer is provided on the attaching parts 8 of the cleaning tool 10 for floor wiping, attaching could be effected onto the pedestal 12 of a cleaning tool 10 for floor wiping that is not provided with a fixed member such as the stop 13. Also, although not particularly shown in the drawing, it would be possible to provide slits in the sheet 1 for a cleaning tool for attaching onto for example the pedestal of the cleaning tool in the attaching parts 8, 8, 8 in the vicinity of the two end edges 2a, 2b in the direction of flow of the fibers of the fiber bundles 3.

The base sheet 2 and/or fiber bundles 3 of the sheet 1 for a cleaning tool according to the present invention could be coated with an agent for enhancing the dirt capturing ability. Examples of such an agent that may be mentioned include an oiling agent or the like containing a mineral oil such as liquid paraffin or the like, a silicone oil or a nonionic surfactant.

Figure 5 is a perspective view showing the external appearance of an example of a cleaning tool for floor wiping.

laminating fiber bundles 3a of slender fibers onto the base sheet 2 and joining by thermal fusion with the central joining part 4 and spot-form joining parts 7, then joining the fiber bundles 3b of thick fibers with the central joining part 4.

It should be noted that, in the cleaning sheet 1 of the hand-held cleaning tool sheet 20, the positions where the joining parts of the spot-form joining parts 7 that are intermittently formed on parallel lines between the two end edges 2a, 2b parallel with the central joining part 4 are provided is further inwards than the position where the cuts 25 are provided i.e. they are formed so as not to overlap the cuts 25.

In the cleaning tool sheet 1 of the hand-held cleaning tool sheet 20 shown in Figure 8, in the same way as in the case of the sheet shown in Figure 1, the spot-form joining parts 7 are formed using two parallel lines respectively provided as parallel lines between the two end edges 2a, 2b that are parallel with the central joining part 4. It would also be possible to form the spot-form joining parts 7 using four parallel lines respectively provided as parallel lines between the two end edges 2a, 2b that are parallel with the central joining part 4.

For the base sheet 2 and fiber bundles 3 (3a, 3b) of the hand-held cleaning tool sheet 20, the material indicated by the cleaning tool sheet 1 shown in Figure 1 can be employed.

31 serve for attaching the hand-held cleaning tool sheet 20 and are formed as bifurcated branch members as shown in Figure 12.

5 In order to attach the hand-held cleaning tool sheet 20 on the holding member 30, the legs 31 of the holding member 30 are inserted from the insertion opening 23 of the holding sheet 21 of the hand-held cleaning tool sheet 20 and held in the holding part 22. When the hand-held cleaning tool sheet 20 becomes contaminated, the legs 31 of the holding member 10 30 are extracted from the insertion opening 23 and replaced by another, uncontaminated hand-held cleaning tool sheet 20; in this way an excellent wiping effect is obtained.

The legs 31 for the holding member 30 of the hand-held wiping cleaning tool shown in Figure 12 are formed in a 15 shape obtained by cutting a cylinder in half. These legs 31 are provided with protrusions 33 that protrude outwards from their periphery at four locations having a prescribed interval in the length direction of the upper periphery of their respective branch members.

20 These protrusions 33 are formed as projections protruding such that the radius of the legs 31 becomes larger rearwardly than forwardly; thus they make it possible for the legs 31 to be inserted comparatively smoothly in the case of insertion from the tips of the legs 31 into the 25 holding part 22 of the hand-held cleaning tool sheet 20 but can prevent the hand-held cleaning tool sheet 20 from